

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Date of Report: 01/05/10

Date Received: 12/30/09

Project: Acid Test, PO M124248, F&BI 912247

Date Analyzed: 12/30/09

**RESULTS FROM THE ANALYSIS OF AQUEOUS SAMPLES  
FOR SPECIFIC GRAVITY  
@ 15.56 °C**

**Sample ID**  
Laboratory ID

**Specific Gravity**

**M124248**  
912247-01

**1.23**

**FRIEDMAN & BRUYA, INC.**

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**RESULTS FROM THE ANALYSIS OF AQUEOUS SAMPLES  
FOR PERCENT ACID**

Sample ID  
Laboratory ID

Percent Acid

M124248  
912247-01

7.9

**FRIEDMAN & BRUYA, INC.**

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**QUALITY ASSURANCE RESULTS  
FOR THE ANALYSIS OF AQUEOUS SAMPLES  
FOR SPECIFIC GRAVITY  
@ 15.56 °C**

Laboratory Code: 912247-01 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Specific Gravity	1.23	1.23	0	0-2

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**QUALITY ASSURANCE RESULTS  
FROM THE ANALYSIS OF AQUEOUS SAMPLES  
FOR PERCENT ACID**

Laboratory Code: 912247-01 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Percent Acid	7.9	8.0	1	0-20

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Charlene Morrow, M.S.  
Yelena Aravkina, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

January 5, 2010



INVOICE # 10ACU0105-1

Accounts Payable  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

RE: Project Acid Test, PO M124248, F&BI 912247 - Results of testing requested by  
Gerry Thompson for material submitted on December 30, 2009.

1 sample analyzed for Specific Gravity @ \$30 per sample	\$ 30.00
1 sample analyzed for Percent Acid Content @ \$75 per sample	75.00
Rush Charges (same day) 150% of \$105.00	<u>157.50</u>
Amount Due .....	\$ 262.50

FEDERAL TAX ID (b) (6)

912247

## SAMPLE CHAIN OF CUSTODY

ME 12/30/09

A14

Send Report To

Gerald Thompson

Company

ALASKAN Copper Works

Address

628 S. Henderson St

City, State, ZIP

Seattle WA 98134

Phone #

206-571-6033

Fax #

206-382-8379

SAMPLERS (signature)

PROJECT NAME/NO.

Acid Test

PO #

m124248

REMARKS

E-mail Results

ASAP

gzt@alaskan.copper.com

Page # of

## TURNAROUND TIME

☐ Standard (2 Weeks)☒ RUSH ASAP

Rush charges authorized by:

## SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	% of Acid	X Spec. Gravity			
m124248	01	12/30/09	10:00	HNO3	1							X	X			ASAP
																ASAP

Friedman & Bruya, Inc.  
3012 16th Avenue West

Seattle, WA 98119

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

## SIGNATURE

Relinquished by:

Received by:

Relinquished by:

Received by:

## PRINT NAME

Gerald Thompson

Prad Binsar

## COMPANY

ACW

Fa BT

## DATE

12/30/09

12/30/09

## TIME

11:00am

11:00 AM

Samples received at 15 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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January 5, 2010

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 30, 2009 from the Acid Test, PO M124248, F&BI 912247 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
ACU0105R.DOC